

Land South of Banbury Rise, Banbury

Sustainable Development to Respond to the Climate Emergency

BLOOR HOMES

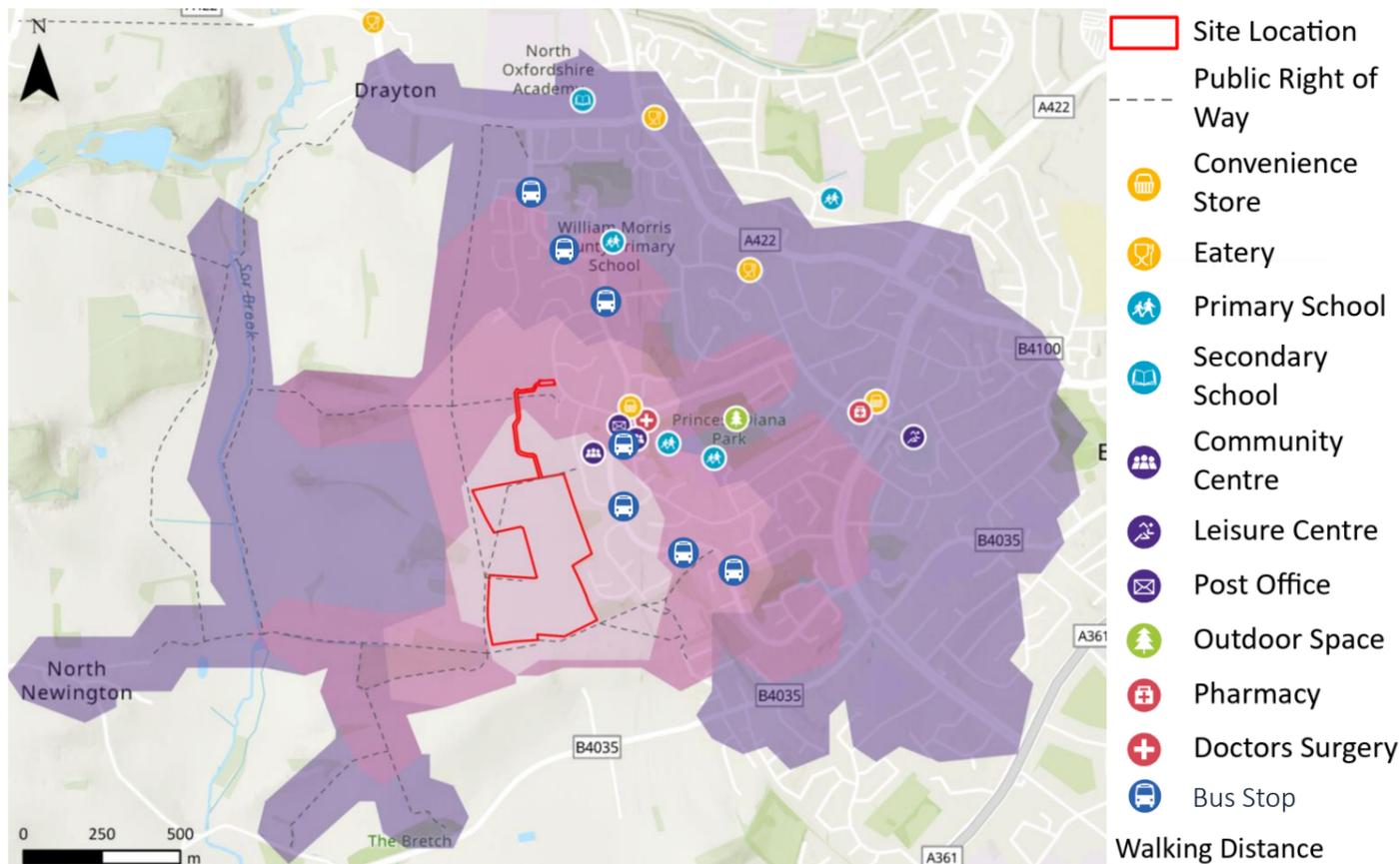


The proposed development aims to deliver much needed new housing at the Land South of Banbury Rise in Banbury, Oxfordshire. The development consists of up to 250 homes with up to 30% affordable housing, public open space, landscaping and associated supporting infrastructure. The site represents a logical and contained extension to the existing urban area and aims to deliver high quality, sustainable buildings that positively contribute to the development of the community. This document highlights the sustainable design features that can be delivered.

SUSTAINABLE LOCATION

The site is situated in an inherently sustainable location to the west of Banbury. The site is bounded by residential dwellings to the east, the consented Banbury Rise residential development to the north, open fields to the south and a farm track to the west which leads to Withycombe Farm.

The proposed development can be defined as being situated within a walkable neighbourhood with several key amenities (leisure clubs, educational facilities & convenience stores) located within an acceptable walking distance, as defined by Oxfordshire City Council. Several bus stops are located along Bretch Hill, and they benefit from a high-frequency service. The nearest railway station is Banbury railway station, which is approximately 3.4km to the east of the site and easily accessible by bus or bicycle. In addition, Banbury's Local Cycling and Walking Infrastructure Plan is currently under development and will provide further enhancements to the local area.



- Site Location
 - Public Right of Way
 - Convenience Store
 - Eatery
 - Primary School
 - Secondary School
 - Community Centre
 - Leisure Centre
 - Post Office
 - Outdoor Space
 - Pharmacy
 - Doctors Surgery
 - Bus Stop
- Walking Distance**
- Less than 400m
 - 400m-800m
 - 800m-1200m
 - 1200m-2000m

SITE SPECIFIC SUSTAINABLE TRANSPORT INTERVENTIONS

- Provision of **EV charging points** for new homes
- Proposed **local PROW improvement works/contribution** in line with the Banbury cycling strategy
- Private cycle parking** for new homes
- Welcome packs** providing local transport information for all residents upon occupation of each new dwelling

	Amenity	Location	Distance to access point (km)	Walking journey time (mins)	Cycling journey time (mins)
	Town centre	Banbury	2.2	25	6
	Convenience store	Bretch Hill	0.4	5	1
	Convenience store	Fairway	1.2	13	3
	Eatery	Fairway	1.2	15	3
	Public House	Warwick Rd	1.8	20	5
	Post office	Bretch Hill	0.4	5	1
	Leisure centre	Dover Avenue	0.1	1	1
	Community centre	Bretch Hill	0.4	5	1
	Community Centre	Hilton Rd	1.3	14	4
	Secondary School	Stratford Rd	1.5	18	5
	Primary School	Bretch Hill	0.85	10	3
	Primary School	Mold Crescent	0.65	8	2
	Primary school	Edmunds Rd	0.5	6	1
	Secondary school	Hornbeam Close	1.7	21	6
	GP	West Bar Street	2.1	25	6
	Pharmacy	Fairway	2.3	29	8

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SUSTAINABLE ENERGY

The proposed development will apply the energy hierarchy to reduce energy demand, supply energy efficiently and generate renewable electricity on site.



As this hierarchy demonstrates, designing out energy use in the first instance is weighted more favourably than the generation of low-carbon or renewable energy to offset unnecessary demand. Applied to this development, the 'fabric first' approach concentrates efforts on:

- Applying fabric standards exceeding building regulation targets.
- Good air tightness targets.
- Careful detailing to minimise thermal bridging.
- Maximising solar gains through form and orientation.
- Low energy lighting.
- Wastewater Heat Recovery and Flue Gas Heat Recovery Systems.
- Efficient controls.

Having reduced energy demand through the 'fabric first' approach, Low and Zero Carbon Technology has also been considered to further reduce carbon dioxide emissions.

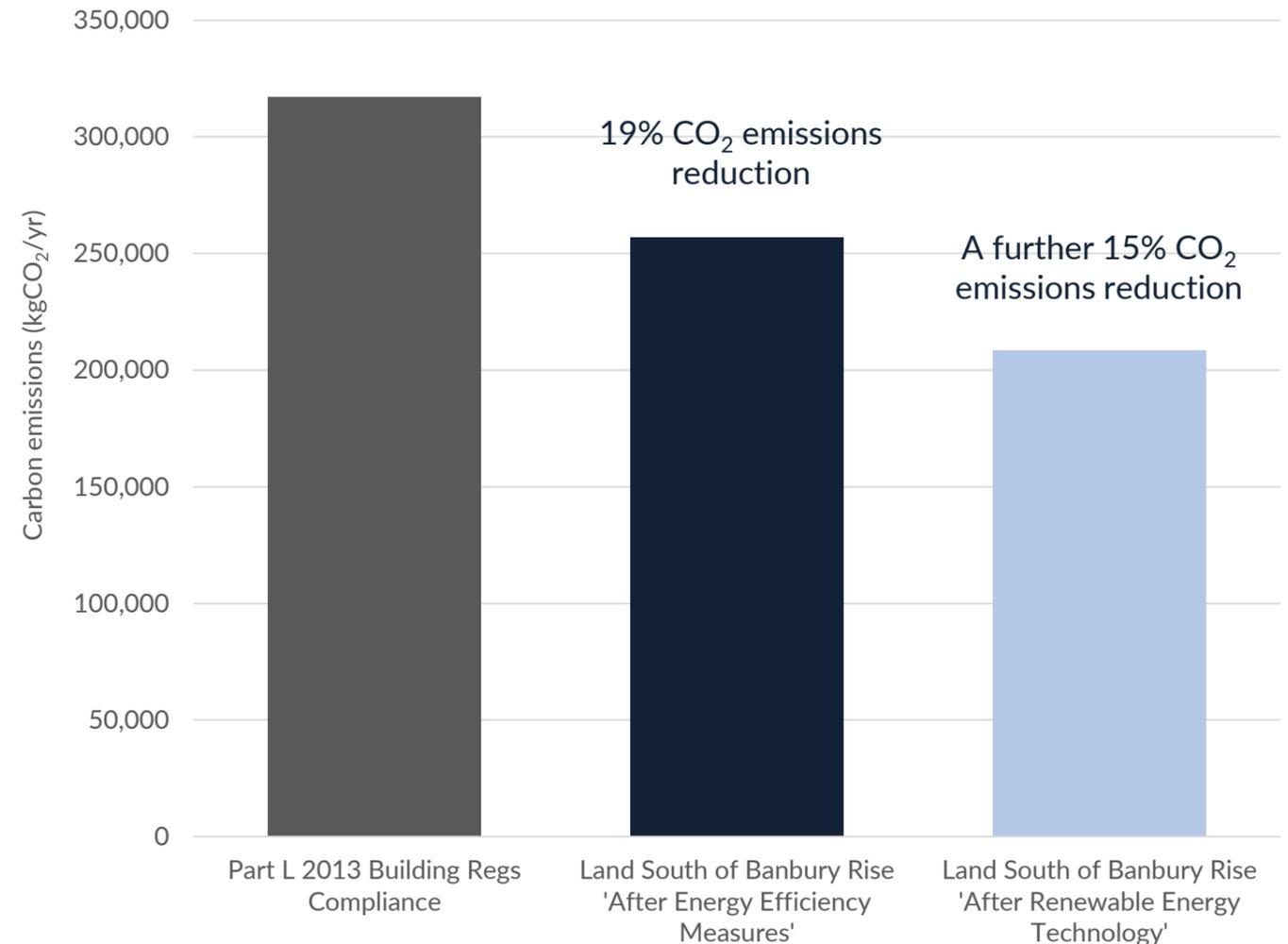
 **Fabric first** energy efficiency strategy to reduce energy demand & bills, saving **13% CO₂** emissions

 **Wastewater heat recovery** to avoid wasted energy, saving **6% CO₂** emissions

 **Rooftop solar panels** to generate renewable electricity on all new dwellings, saving **15% CO₂** emissions

 **Total CO₂ emissions saving of 34% from combination of measures**

Carbon emissions savings



REDUCING GREENHOUSE GAS EMISSIONS

109 tonnes CO₂ will be saved per year across the proposed development from energy efficiency measures and on-site renewable energy generation.

 Emissions reduction equivalent to **3,367 trees planted** per year

 Emissions reduction equivalent to **64 cars off the road**, based on 2020 figures of 221 g/CO₂ per mile and 7,600 miles per year



BIODIVERSITY

A ecological survey was undertaken to ascertain the general ecological value of the site and to identify the main habitats and associated plant species. There are not considered to be any significant adverse effects on any statutory and non-statutory sites of nature conservation from the development proposals.

The majority of the hedgerows within the site will be retained. New areas of landscape planting within the development proposals will provide continued foraging and navigational opportunities for bats. The recommended erection of new bat boxes within the site will provide new roosting opportunities for bats.



Committed to providing a **Biodiversity Net Gain of at least 20%**, over and above the UK Government target



Additional native tree & hedgerow planting to screen views & sequester carbon



Green spaces for recreation & relaxation forming an extension to the existing linear park of Banbury Rise



Installation of **bird & bat boxes** to provide new roosting opportunities, and **hedgehog passes** to protect local populations



CLIMATE CHANGE MITIGATION & ADAPTATION

The scheme will include measures to mitigate and adapt to the effects of climate change. Where possible, the designs will allow for passive solar gain and thermal comfort with dwellings constructed utilising increased standards of building fabric insulation and other materials to reduce energy and resource requirements. Where able, materials will be obtained from renewable and sustainable sources.

Trees and vegetation will provide shaded areas improving occupant comfort which can also help to manage ground moisture levels to help prevent damage occurring to the building via soil shrinkage.

As the design develops, alongside well-designed public spaces the proposed water management and planting strategies will offer the opportunity to enhance and optimise the development proposals, providing resilience to climate change and supporting biodiversity.



SUSTAINABLE RESOURCES

The proposed development will maximise resource efficiency through the specification of sustainable materials, fixtures and fittings.

Dwellings will achieve water use below 110 litres/person/day through the use of dual flush WCs and restricted tap and shower flow rates.

The site is shown to be located within Flood Zone 1 which is land defined as having a low probability of flooding from rivers or the sea.

Sustainable Drainage Systems will manage surface water runoff, through natural infiltration and onsite attenuated storage. It is proposed to incorporate surface water attenuation and storage as part of the development proposals to prevent surface water runoff overloading the local drainage network. Sufficient storage for events up to the 1 in 100-year storm with a 40% allowance for climate change will be provided.

Materials selected for construction, including hard and soft landscaping elements, will be carefully chosen to ensure that they are high-quality, durable and that 'whole life costs' are manageable. Where possible, these will be selected from responsible, local suppliers who can provide environmental certificates for the manufacturing processes of their products. Sustainable choices will reduce initial manufacturing environmental impacts, long-term maintenance costs and waste from construction, whilst maximising resilience and buildings lifespans.



Dwellings to achieve water use below **110 litres/person/day**



Sustainable Drainage Systems manage surface water runoff, through natural infiltration & onsite attenuated storage



Recycling & waste storage facilities



Materials will be selected from **responsible, local suppliers**, where possible